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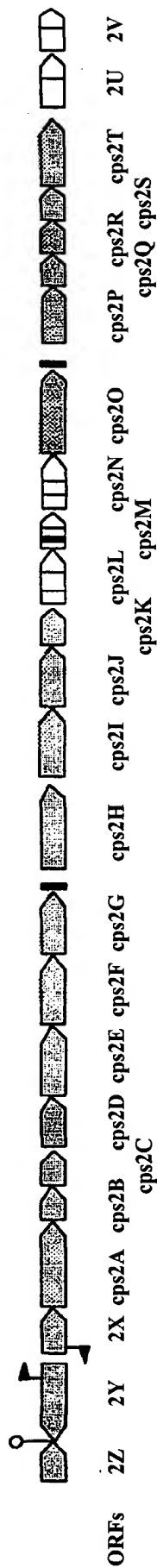


FIG. 1A

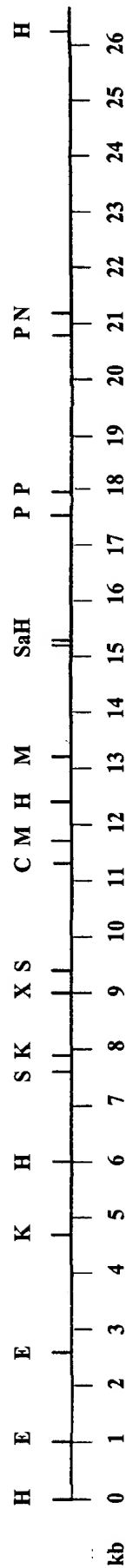


FIG. 1B

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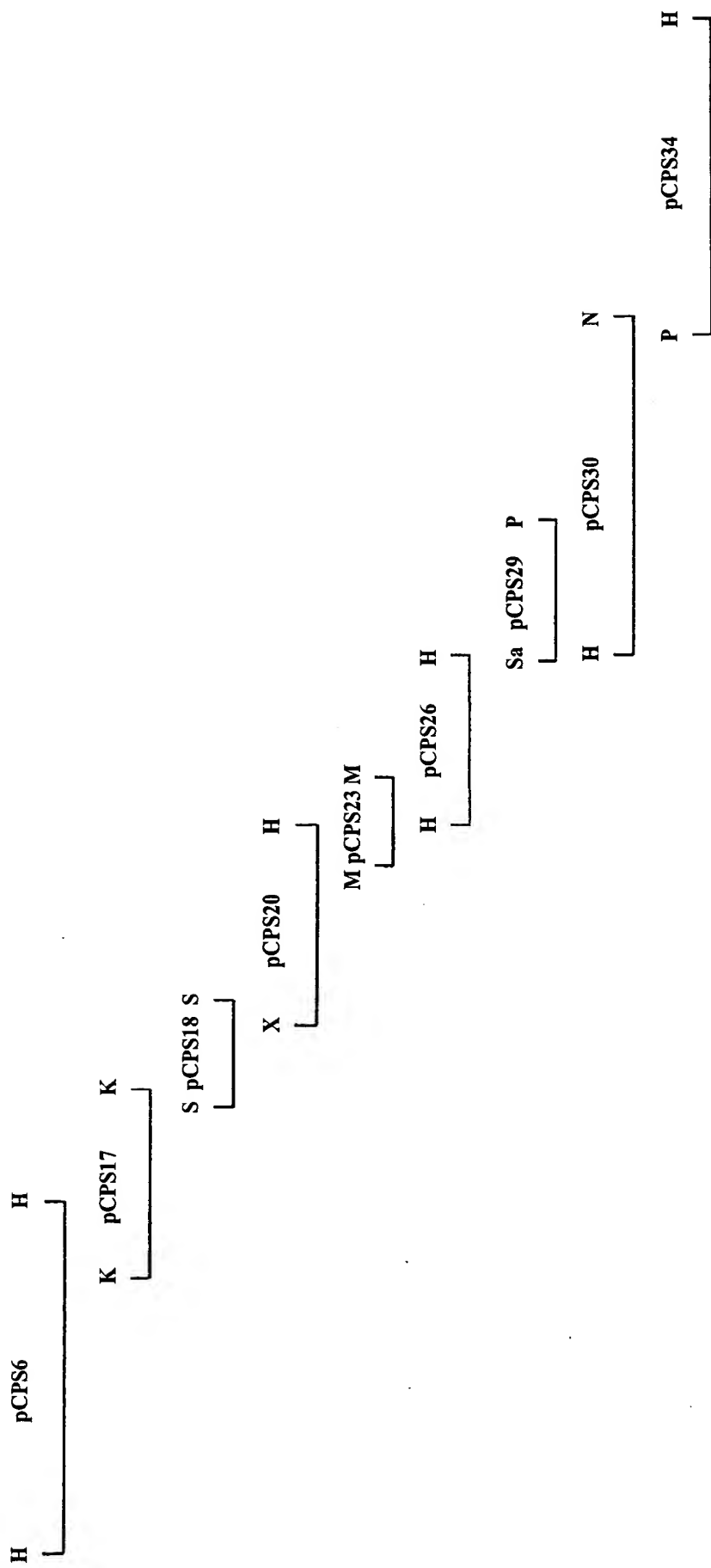


FIG. 1C

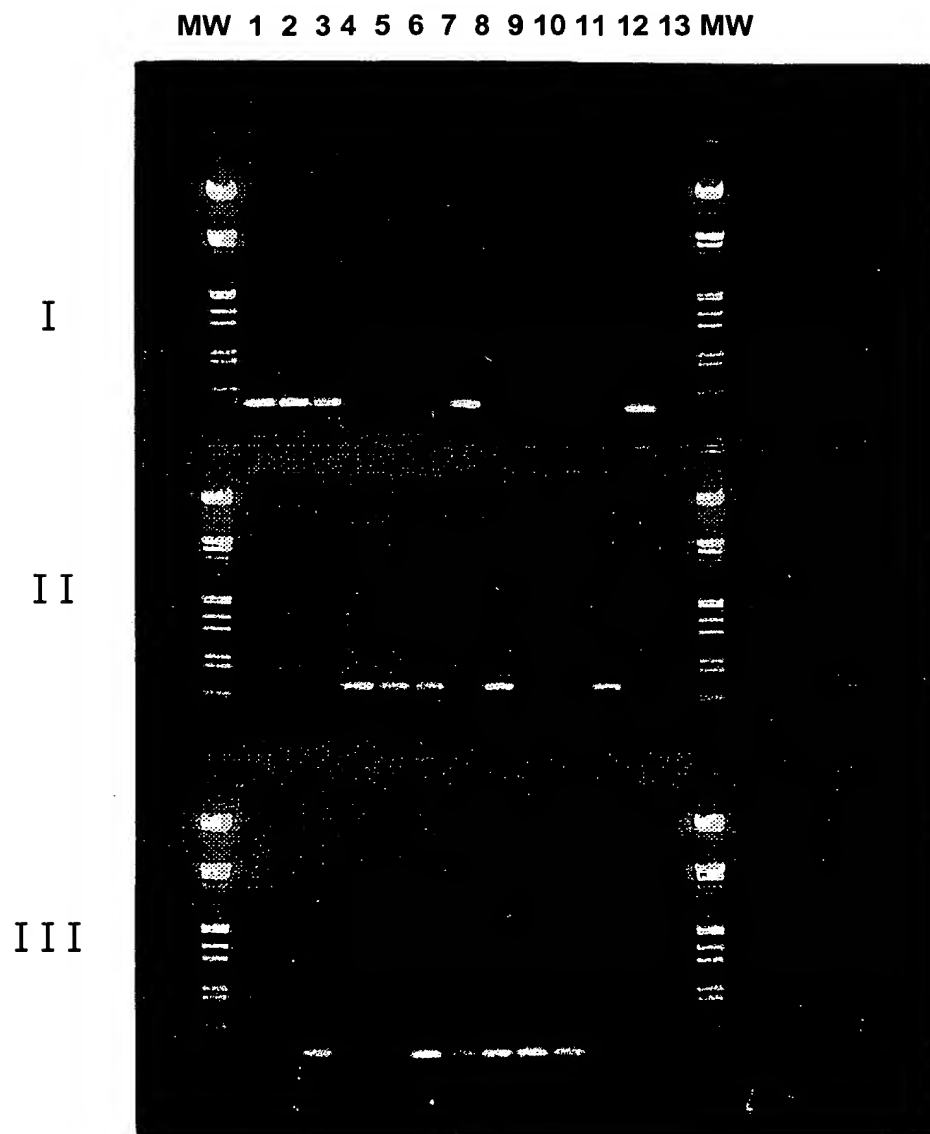


FIG. 2

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CTAGGGATAT	GTATATCGAA	GAGCATCCGA	ATGTCAATAT	CCATTTGATA	
GATAGTTTGT	CAGCCAGTGG	GGAAATGGAT	TTACTTGTAC	ACCAAATCAA	TCGCTTAATT
AGTGCAGGAT	TAGATTTTCC	ACAAGTAGTA	GAAGCGATAA	CTCACTATCG	
GGAACACAGT	AAGCTCCTCT	TTGTTTTAGC	GAAAGTTGAT	AATCTTGTTA	AGAATGGAAG
ACTGAGCAAA	TTGGTAGGCA	CTGTCGTTGG	TCTTCTCAAT	ATCCGTATGG	
TTGGTGAGGC	AAGTGCTGAA	GGAAAATTAG	AGTTGCTTCA	AAAGGCGCGT	GGTCATAAGA
AATCTGTGAC	AGCAGCCTTT	GAAGAAATGA	AAAAAGCAGG	CTATGATGGT	
GGTCGAATTG	TTATGGCCCA	CCGCAACAAT	GCTAAGTTCT	TCCAACAATT	CTCAGAGTTG
GTAAAAGCAA	GTTTTCCAAC	GGCTGTTATT	GACGAAGTTG	CAACATCAGG	
TCTATGCAGT	TTTTATGCTG	AAGAAGGTGG	ACTTTTGATG	GGCTACGAAG	TGAAAGCGTG
ATTCACAGAG	TAATAATTTT	GGGCTGTAAT	TTCCGCTATA	GAATAATCCC	
CCTCTTCTTC	TAAGTTCGAG	GGGGATTGTT	TGATGAGAC	TATTGGATTT	CATTCATTCA
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SEQ ID NO:10

FIG. 3I

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KSGYYILED RDFQDHTCRAQSYRLSRITYEDFRICLKESLIGRENYLFNYYHQQEGLAEL
ISSVQSLLMDYHVYTKKDQLVITAGSQQALYILTQMETLAGKTEILINPTYSRMIELIR
HQGIPYQTIERNLDGIDLEELESIFQTGKIKFFYTIPRLHNPLGSTYDIATKTAIVKLAK
QYDVYIIEDDYLA DFDSSHSLPLHYLDTDNRVIYIKSFTPTLFPALRIGAI SLPNQLRDI
FIKHKSLIDYDTN LIMQKALS LYIDNGMFARNTQHLHHIYHAQWNKIKDCLEKYALNIPY
RIPKGSVTFQLSKGILSPSIQHMF GKCY YFSGQKADFLQIFFEQDFADKLEQFVRYLNE

ORF2Y

DNA Serotype 2

SEQ ID NO:53

FIG. 3J

MKIIIPNAKEVNTNLENASFYLLSDRSKPVLDAISQFDVKKMAAFYKLNEAKAELEADRW
YRIRTGQAKTYPAWQLYDGLMYRYMDRRGIDSKEENYL RDHVRVATALYGLIHPFEFISP
HRLDFQGSLKIGNQSLKQYWRPYYDQEVGDDELILSLASSEFEQVFPQIQKRLVKILFM
EEKAGQLKVHSTISKKGRGRLLSWLAKNNIQELSDIQDFKVDGFEYCTSESTANQLTFXR
SIKM

ORF2X

DNA Serotype 2

SEQ ID NO:11

FIG. 3K

MKKRSGRSKSSKFKLVNFALLGLYSITLCLFLVTMYRYNILD FRYLNYIVTLLLVGVAVL
AGLLMWRKKARIFTALLLVFSLVITSVGIYGMQEVVKFSTRLNSNSTFSEYEMSILVPAN
SDITDVRQLTSILAPAEYDQDNITALLDDISKMESTQLATSPGTSYLTAYQSMLNGESQA
MVFNGVFTNILENEDPGFSSKVKKIYSFKVTQTVETATKQVSGDSFNIIYISGIDAYGPIS
TVSRSDVNIIMTVNRATHKILLTTTPRDSYVAFADGGQNQYDKLTHAGIYGVNASVHTLE
NFYGIDISNYVRLNFI SFLQLIDLVG GIDVYNDQEFTSLHGNYHFPVGQVHLNSDQALGF
VRERYSLTGGDNDRGKNQEKVIAALIKKMSTPENLKNYQAILSGLEGSIQTDLSLETIMS
LVNTQLESGTQFTVESQALTGTGRSDLSSYAMPGSQLYMMEINQDSLEQSKAAIQSVLVE
K

CPS2A

DNA Serotype 2

SEQ ID NO:12

FIG. 3L

MNNQEVNAIEIDVLFLLKTIWRKKFLILLTAVLTAGLAFVYSSFLVTPQYDSTTRIYVVS
QNVEAGAGLTNQELQAGTYLAKDYREIILSQDVLTQVATELNLKESLKEKISVSI PVDTR
IVSISVRDADPNEAARIANSLRTFAVQKVVEVTKVSDVTTLEEAVPAEPTTPNTRNIL
LGLLAGGILATGLVLVMEVLDDRVRKRPQDIEEVMGLTLLGIVPDSKKLK

CPS2B

DNA Serotype 2

SEQ ID NO:13

FIG. 3M

MAMLEIARTKREGV NKTEEFNAIRTN IQLSGADIKVVGITSVKSNEGKSTTAASLAIAY
ARSGYKTVLVDADIRNSVM PGFFKPITKITGLTDYLAGTTDLSQGLCDTDIPNLTVIESG
KVSPNPTALLQSKNFENLLATLRRYYDYVIVDCPPLGLVIDAIIAQKCDAMVAVVEAGN
VKCSSLKKVKEQLEQTGTPFLGVILNKYDIATEKYSEYGNYGKKA

CPS2C

DNA Serotype 2

SEQ ID NO:14

FIG. 3N

MIDIHSHIIFGVDDGPKTIEESLSLISEAYRQGVRYIVATSHRRKGMFETPEKIIMINFL
QLKEAVAEVYPEIRLCYGAELYYSKDILSKLEKKKVPTLNGSCYILLEFSTDTPWKEIQE
AVNEMTLLGLTPVLAHIERYDALAFQSERVEKLIDKGCYTQVNSNHVLKPALIGERAKEF
KKRTRYFLEQDLVHCVASDMHNLYSRPPFMREAYQLVKKEYGEDRAKALFKKNPLLILKN
QVQ

CPS2D

DNA Serotype 2

SEQ ID NO:15

FIG. 30

MNIEIGYRQTKLALFDMIAVTISAILTSHIPNADLNRSGIFIIMMVHYFAFFISRMPVEF
EYRGNLIEFEKTFNYSIIFVIFLMAVSFMLENNFALSRRGAVYFTLINEFVLVYLENVIK
QFKDSFLFSTTYQKKTILITTAELWENMQVLFESDILFQKNLVALVILGTEIDKINLPLP
LYYSVEEAIGFSTREVVDYVFINLPSEYFDLKQLVSDFELLGIDVGVDINSFGFTVLKNK
KIQMLGDHSIVTFSTNFYKPSHIWMKRLLDILGAVVGLIISGIVSILLIPIIRRDGGPAI
FAQKRVGQNGRIFTFYKFRSMFVDAEVRKKELMAQNQMGGMFKMDNDPRITPIGHFIRK
TSLDELPQFYNVLIGDMSLVGTRPPTVDEFEKYTPSQKRRLSFKPGITGLWQVSGRSDIT
DFNEVVRLDLTYIDNWTIWSDIKILLKTVKVLLREGGQ

CPS2E

DNA Serotype 2

SEQ ID NO:16

FIG. 3P

MRTVYIIGSKGIPAKYGGFETFVEKLTEYQKDKSINYFVACTRENSAKSDITGEVFEHNG
ATCFNIDVPNIGSAKAILYDIMALKKSIEIAKDRNDTSPIFYILACRIGPFIYLFKKQIE
SIGGQLFVNPDGHEWLREKWSYPVRQYWKFSESLMLKYADLLICDSKNIEKYIHEDYRKY
APETSYIAYGTDLDKSRLSPTDSVVREWYKEKEISENDYYLVVGRFVPENNYEVMIREFM
KSYSRKDFVLI TNVEHNSFYEKLKKETGFDKDKRIKFVGTVYNQELLKYIRENAFAYFHG
HEVGGTNPSLLEALSSTKLNLLLDVGFNREVGEAGAKYWNKDNLHRVIDSCEQLSQEQIN
DMDSLSTKQVKERFSWDFIVDEYEKLFKG

CPS2F

DNA Serotype 2

SEQ ID NO:17

FIG. 3Q

MKKILYLHAGAELYGADKVLLLELIKGLDKNEFEAHVILPNDGVLVPALREVGAQVEVINY
PILRRKYFNPKGIFDYFISYHHYSKQIAQYAIENKVDI IHNNTTAVLEGIY LKRKLKLPL
LWHVHEIIVKPKFISDSINFLMGRFADKI VTSQAVANHIKQSPHIKDDQISVIYNGVDN
KV FYQSDARSVRERFDIDEEALVIGMVGRVNAWKQGDFLEAVAPIEQNPKAIAFIAGS
AFEGEEWRVVELEKKISQLKVSSQVXRMDYYANTTELYNMF DIFVLPSTNPDPLPTVVLK
AMACGKPVVGYRHGGVCEMVKEGVNGFLVTPNSPLNLSKVILQLSENINLRKKIGNNSIE
RQKEHFS LKSYVKNFSKVYTS LKVY

CPS2G

DNA Serotype 2

SEQ ID NO:18

FIG. 3R

MKIISFTMVNNESEIIESFIRYNYNFIDEMVIIDNGCTDNTMQIIFNLIKEGYKISVYDE
SLEAYNQYRLDNKYLTKIIAEKNPDLIIPLDADEFLTADSNPRKLEQLDLEKIHVYVNWQ
WFVMTKKDDINDSFIPRRMQYCFEKPVWHHSDGKPVTKCIISAKYYKKMNLKLSMGHHTV
FGNPNVRIEHHNDLKFAHYRAISQEQLIYKTICYTIRDIATMENNIETAQRTNQMALIES
GVDMWETAREASYSGYDCNVIHAPIDLSFCKENIVIKYNELSRETVAERVMKTGREMAVR
AYNVERKQKEKKFLKPIIFVLDGLKGDEYIHPNPSNHLTILTEMYNVRGLLTDNHQIKFL
KVNYRLIITPDEAKFLPHEFIVVPDIXDIEQVKSQYVGTGVDLSKIISLKEYRKEIGFIG
NLYALLGFVPNMLNRIYLYIQRNGIANTI IKIKSRL.

CPS2H

DNA Serotype 2

SEQ ID NO:19

FIG. 3S

MQADRRKTFGKMRI RINNLFVVAIAFMGIIISNSQVVL AIGKASVIQYLSYLV LILCIVN
DLLKNNKHIVVYKLG YLFLII FLFTIGICQQILPITTKIYLSISMMIISVLATLPISLIK
DIDDFRRISNHLLFALFITSILGIKMGATMFTGAVEGIGFSQGFNGGLTHKNFFGITILM
GFVLTYLAYKYGSYKRTDRFILGLELFLILISNTRSVYLILLLFLFLVNLDKIKIEQRQW
STLKYISMLFCAIFLYYFFGFLITHSDSYAHRVNGLINFFEYYRNDWFHLMFGAADLAYG
DLTLDYAIRVRRVLGWNGTLEMPLLSIMLKNGFIGLVGYGIVLYKLYRNVRIKTDNIKT
IGKSVFIIVVLSATVENYIVNLSFVFMPICFCLLNSISTMESTINKQLQT

CPS2I

DNA Serotype 2

SEQ ID NO:20

FIG. 3T

MEKVSIIIVPIFNTEKYLRECLDSIIISQSYTNLEILLIDDGSSDSSTDICLEYAEQDGRIK
LFRLPNGGVSNARNYGIKNSTANYIMFVDSDDIVDGNIVESLYTCLKENDSDLSGGLLAT
FDGNYQESELQKCQIDLEEIKEVRDLGNENFPNHMSGIFNSPCKLYKNIYINQGFDE
QWLGEDLLFNLNYLKNIKKVRYVNRNLYFARRSLQSTTNTFKYDVFIQLENLEEKTFDLF
VKIFGGQYEFVFKETLOWHIIYYSLMFKNNGDESLPKKLHIFKYLYNRHSLDTLSIKRT
SSVFKRICKLIVANNLFKIFLNTLIREEKND

CPS2J

DNA Serotype 2

SEQ ID NO:21

FIG. 3U

MINISIIVPI YNVEQYLSKC INSIVNQTYK HIEILLVNDG STDNSEEICL AYAKKDSRIR
YFKKENGGLS DARNYGISRA KGDYLAFIDS DDFIHSEFIQ RLHEAIEREN
ALVAVAGYDR VDASGHFLTA EPLPTNQAVL SGRNVCKKLL EADGHRFVVA WNKLYKKELF
EDFRFEKGKI HEDEYFTYRL LYELEKVAIV KECLYYYVDR ENSIITSSMT
DHRFHCLLEF QNERMDFYES RGDKELLLEC YRSFLAFVL FLGKYNHWLS KQOKKLLQTL
FRIVYKQLKQ NKRLALLMNA YYLVGCLHLN FSVFLKTGKD KIQERLRSE
SSTR

CPS2K

DNA Serotype 2

SEQ ID NO:22

FIG. 3V

MSKKSIVVSG LVYTIGTILV QGLAFITLPI YTRVISQEVY GQFSLYNSWV GLVGLFIGLQ
LGGAFGPGWV HFREKFDDFV STLMVSSIAF FLPIFGLSFL LSQPLSLLFG
LPDWVVPLIF LQSLMIVVQG FFTTYLVQRQ QSMWTLPLSV LSAVINTALS LFLTFFMEND
FIARVMANPA TTGVLACVSX WFSQKKNGLH FRKDYLRYGL SISIPLIFHG
LGHNVLNQFD RIMLGKMLTL SDVALYSFGY TLASILQIVF SSLNTVWCPW YFEKKRGADK
DLSYVRYYL AIGLFVTFGF LTIYPELAM LGGSEYRFSM GFIPMIIVGV
FFVFLYSFPA NIQFYSGNTK FLPIGTFIAG VLNISVHFVL IPTKNLWCCF ATTASYLLLL
VLHYFVAKKK YAYDEVAIST FVKVIALVVV YTGLMTVEVG SIWIRWSLGI
AVLVVYAYIF RKELTVALNT FREKRSK

CPS20

DNA Serotype 2

SEQ ID NO:23

FIG. 3W

MVYIIAEIGC NHNGDVHLAR KMVEVAVDCG VDAVKFQTFK ADLLISKYAP KAEYQKITTG
ESDSQLEMTR RLELSFEEYL DLRDYCLEKG VDVFSTPFDE ESLDFLISTD
MPVYKIPSGE ITNLPYLEKI GRQAKKVILS TGMVAVMDEIH QAVKILQENG TTDISILHCT
TEYPTYPYPAL NLNVLHTLKK EFPNLTIGYS DHSVGSEVPI AAAAMGAELI
EKHFTLDNEM EGPDKASAT PDILAALVKG VRIVEQSLGK FEKEPEEEVEV RNKIVARKSI
VAKKAIKAGE VFTEENITVK RPGNGISPME WYKVLGQVSE QDFEEDQNIC
HSAFENQM

CPS2P

DNA Serotype 2

SEQ ID NO:24

FIG. 3X

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MKKICFVTGS RAEYGIMRRL LSYLQDDPEM ELDLVVTAMH LEEKYGMTVK DIEADKRRIV
KRIPLHLTDT SKQTIVKSLA TLTEQLTVLF EEVQYDLVLI LGDRYEMLPV
ANAALLYNIP ICHIHGGEKT MGNFDESIRH AITKMSHLHL TSTDEFNRNV IQLGENPTMY

CPS2Q

DNA Serotype 2

SEQ ID NO:25

FIG. 3Y

MELGIDFAED YYVLFHPVT LEDNTAEEQT QALLDALKED GSQCLIIGSN SDTHADKIME
LMHEFVKQDS DSYIFTSLPT RYYHSLVKHS QGLIGNSSSG LIEVPSLQVP
TLNIGNRQFG RLSGPSVVHV GTSKEAIVGG LGQLRDVIDF TNPFEQPSA LQGYRAIKEF
LSVQASTMKE FYDR

CPS2R

DNA Serotype 2

SEQ ID NO:26

FIG. 3Z

MKKVAFLGAG TFS DGVL PWL DRTRYELIGY FEDKPISDYR GYPVFGPLQD VLTYLDDGKV
DAVFVTIGDN VKRKEIFDLL AKDHYDALFN IISEQANIFS PDSIKGRGVF
IGFSSFVGAD SYVDNCIIN TGAIVEHHTT VEAHCNITPG VTINGLCRIG ESTYIGSGST
VIQCIEIAPY TTLGAGTVVL KSLTESGTYV GVPARKIK

CPS2S

DNA Serotype 2

SEQ ID NO:27

FIG. 3AA

MEPICCLIPAR SGSKGLPNKN MLFLDGVPMI FHTIRAAIES GCFKKENIYV STDSEVYKEI
CETTGVQVLM RPADLATDFT TSFQLNEHFL QDFSDDQVFV LLQVTSPLRS
GKHVKEAMEL YGKGQADHVV SFTKVDKSPT LFSTLDENG F AKDIAGLGGS YRRQDEKTLY
YPNGAIYISS KQAYLADKTY FSEKTAAYVM TKEDSIDVDD HFDFTGVIGR
IYFDYQRREQ QNKPFYKREL KRLCEQRVHD SLVIGDSRLL ALLLDGFDNI SIGGMTASTA
LENQGLFLAT PIKKVLLSLG VNDLITDYPL HMIEDTIRQL MESLVSKAEQ
VFVTTIAYTL FRDSVSNEEI VQLNDVIVQS ASELGISVID LNEVVEKEAM LDYQYTNDGL
HFNQIGQERV NQLILTSLTR

CPS2T

DNA Serotype 2

SEQ ID NO:28

FIG. 3BB

ATCGCCAAAC	GAAATTTGGCA	TTATTTTGATA	TGATAGCAGT	TGCAATTTTCT	GCAATCTTAA	CAAGTCATAT
ACCAAATGCT	GATTTAAATC	GTTCTGGAAT	TTTTATCATA	CAGTTGAATT	TGAGTATAGA	GGTAATCTGA
ATGATGGTTC	ATTATTTTGC	ATTTTTTTATA	TCTCGTATGC	TTCGCAC TTT	CAAGACGTGG	TGCCGTGTAT
TAGAGTTTGA	AAAAACATTT	AACTATAGTA	TAATATTTGC	AATCTATCAA	AAAAAGACGA	TTCTAATTAC
AATTTTTCTT	ACGGCAGTAT	CATTTTTGT	GGAGAATAAT	TTTAGGTAC	AGAAATAGAT	AAAATTAATT
TTCACATTAA	TAAACTTCGT	TTTGGTATAC	CTATTTAACG	CTACCAAGTG	AGTTTTTAGA	CGTAAAGCAA
TAATTATTAA	GCAGTTTAAG	GATAGCTTTC	TATTTTCGAC	AAAAATCCAA	CTGCTAGGTG	ACCATAGCAT
AACGGCTGAA	CGATGGGAAA	ATATGCAAGT	TTTATTTGAA	GGTTAATTAT	TTGTGGTATA	GTTTCTATTT
TCACATAAAC	AAATTCAAAA	AAATCTTGTT	GCATTGGTAG	ACATTCTACA	AGTTTCGATC	GATGTATGTT
TATCATTACC	GCTCTATTAT	TCTGTGGAAG	AAGCTATAGA	CCTAGAATTA	CTCCAATTGG	ACATTTTCATA
GTTTTCAACA	AGGGAAGTGG	TCGACCACGT	CTTTATAAAT	CTACAGTTGA	TGAATTTGAA	AAATATACTC
TTCGTTTCAG	ATTTTGAGTT	GTTAGGTATT	GATGTAAGCG	TTTCGACGACG	TAGTTCGGTT	GGACTTAGCA
TTGATATTAA	TTCATTCCGT	TTTACTGCGT	TGAAAAACAA	TAAGTAAAAG	TATATGAAAG	TTTGTTTGGT
TGTAAC TTTT	TCCACAAATT	TTTATAAGCC	TAGTCATATC	TTGATAAAGA	GGATGCAAGA	AGTCTTTTGA
ATGATGAAAC	GACTTTTGGA	TATACTCGGA	GCGGTAGTCG	AAAATTTTAC	GTGATGAGAA	ACCAGATGTT
TGTTAGTTCC	AATTATTCGT	AGAGATGGTG	GACCGGCTAT	AGTATTTGAT	CGAGTTAATA	AATCTACATT
TTTTGCTCAG	AAACGAGTTG	GACAGAATGG	ACGCATATTT	TTAACTTGGG	GAGTATTTTT	TAATGATTTT
GATGCTGAGG	AGCGCAAAAA	AGACTTGCTC	AGCCAAAACC	CCGACGAAAT	ATTTATTCAA	ACAGGATATT
AGATGCAAGG	GTGGGTATGT	TTTAAATG	GAAAAACGAT	GTAGTTATTT	GCCACGGAGG	CCCCGCTACT
CGCAAAAACA	AGTTTAGACG	AGTTACCACA	GTTTTATAAT	TCAAGTAGAG	TTTGTAAGAA	GAATTTTACA
GTTTTAATTG	GCGATATGAG	TCTAGTTGGT	ACACGTCCAC	CATCAAATAA	TAATTTTTTT	TGTGAAAGAT
CTGGTCAAAA	GAGACGATTG	AGTTTTAAAC	CAGGGATTAC	TAATTTTCT	CAGATTTTAC	TGGAGAGGGA
AGGTCTCTGG	CAGGTTAGTG	GTCGTAGTAA	TATCAGACAC	TTGATAATGT	ACTGTTTAGA	ATTTTATTAA
TACATTGATA	ATTGGACTAT	CTGGTCAGAT	ATTAAAATTT	TTGGTTCTAA	TTGGGTTTCG	CTTCCACATG
TATTAAGAC	AGTGAAAGTT	GTATTGTTGA	GAGAGGGAAG	ATACAGACAA	TTATAGAAAA	ATATGAATTT
CGGTTCTTCA	GGGGGACATT	TGACTCACTT	GTATTTGTTA	TGATTCTATT	GATGAATTGC	TAAATGCAAG
AAACCGTTTT	GGAAGGAAGA	AGAACGTTTT	TGGGTAACAT	ATAGTTGATT	TTGTGAGAGT	AATGTATGTT
AGAATGAAAA	AATGTATCCA	TGTTACTTTC	CAACAAATCG	TATTTTATTT	AATTTTATG	AATTTAATTT
CAATCTCATT	AATTTAGTGA	AAAATACTTT	CTTAGCTTTC	TTTGTTTCAG	TAGTCACAAG	TATGTTTGT
ATTATTTTCAT	CTGGTGCGGC	CGTTGCTGTC	CCCTTCTTTT	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
ACATCGGAAA	ACTATTTGGA	GCAAAGACGA	TTTATATTGA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
AACTGGAAAA	CTAGTTTATC	CCGTAACAGA	TATTTTTATT	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
GTTCACTGGG	AAGAAATGAA	GAAGGTATAT	CCTAAATCTA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TGTAACAGTA	GGAACCTCATG	AACAACAGTT	TAAATCGATTG	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
ATAAAAAGAGA	TTGATTTTATT	GAAAAAAAT	GGAAGTATAA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
CTGACTATAT	TCCAGAATAT	TGCAAGTATA	AAAAATTTCT	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
CAGTTACAAA	GAAATGGAAC	AATATATTAA	CAAATCAGAA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TTTATGAATT	CATTATCCAA	AGGAAAAAAA	CAATTATTGT	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TTCCTAGACA	AAAAAAGTAT	GGTGAACATG	TAAATGATCA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
AGATAATAAT	ATTTTATTTA	TAGAAAATAT	AGATGATTTG	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TTTGAAAAAA	TTATTGAAGT	TTCTAAGCAA	ACTAACTTTA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TAAAACAAAT	AGTTGAAAAA	TTTAATGAGG	ATCAAGAAAA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TGAATAATAA	AAAAGATGCA	TATTTGATAA	TGGCTTATCA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TACAGATATT	ATCATCTTCT	CTCAGGAGAA	TGCACACCAT	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TAGTTCCCTTC	AGCAATACCTG	TATAATTATT	TTAAATATTC	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TGAGCAAAAA	TATAAAGAAA	ATAGGATATA	TGAACGAGTT	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
AAATGTTACA	GATTATTTCC	TAATATATCA	GAAAAAATAA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
GAATGTATCG	AGCTTTTGAA	TACTATTTAC	AAAGATTGTT	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
GTTTATTGAT	AGAATAAAAA	ACATGGTCTA	AGAATAAGAT	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
ATTTTGTGGC	AATCTTTTTA	TCAAATGAAA	ACGAAACAGC	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TTATTTATTT	AGTAATCTA	AATGTCCAGA	TGAAC TATTT	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TCAAATAGAT	TATCTAAATA	TGGAAATTTA	AGATATATAA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
AGTGGAAAAA	ATCAACATCT	TCTCCTATTG	TCTTTACAGA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
AAATTTAGGT	TTTTTATTTG	CTAGAAAGTT	AAAAATAGAA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
AATAAATCTA	AATTTAAAGA	AATTATTACT	AAAAAATAAA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TAAATTTATTT	AAATATGACC	CGGAATATTT	TATTTTTAAG	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TACTTCTGGT	TGATTATTTT	TATTCAGAG	CAAAAGTATG	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TATTTTCATAT	AAAAATTTTG	AAAAC TAAGC	TAATATTAAA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
AAATGAAATT	TTATTGTTTT	TATTATGGTC	TATATTATGT	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
GAAATAAATT	TTGAAAGATT	ATTTGCAGAT	TTTACTGCTC	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
CCATAAATTTG	ATTATTGCA	ATAATGTATT	ATAATTTGTA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
AAAAAATAGT	ATCTTTTTTA	GTTTTTTAGT	TTTATTAGGT	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
ATATCTGCAT	TGTATATTAT	TCAAAATGGG	AAAGATATTG	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
ACTATCTTAT	AACAGGCGTC	AAAACAAGGT	TGGTTGGCTT	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
TATGAAC TAT	CCTACGTTAA	ATACCACTAC	AATTATAGTT	TTTGTTCAG	TAGTCACAAG	TATGTTTGT
AATAAAATGC	AACAATTTTT	TTTCTTGTGT	CTTGCTTTTA	TTTGTTCAG	TAGTCACAAG	TATGTTTGT

TACCGATCTA	TTTAAGTGGA	TCGAGAATTG	GTAGTTTATC	GCTAGCAATA	TTAATTATAT	GCTTGTTATG
GAGATATATA	GGTGGAAAAAT	TTGCTTGGAT	AAAAAAGCTA			
ATAGTAATAT	TTGTAATACT	ACTTATTATT	TTAAATACTG	AATTGCTTTA	CCATGAAATT	TTGGCTGTTT
ATAATTCTAG	AGAATCAAGT	AACGAAGCTA	GATTTATTAT			
TTATCAAGGA	AGTATTGATA	AAGTATTAGA	AAACAATATT	TTATTTGGAT	ATGGAATATC	CGAATATTCA
GTTACGGGAA	CTTGGCTCGG	AAGTCATTCA	GGCTATATAT			
CATTTTTTTT	TAAATCAGGA	ATAGTTGGGT	TGATTTTACT	GATGTTTTCT	TTTTTTTATG	TTATAAAAAA
AAGTTATGGA	GTTAATGGGG	AAACAGCACT	ATTTTATTTT			
ACATCATTAG	CCATATTTTT	CATATATGAA	ACAATAGATC	CGATTATTAT	TATATTAGTA	CTATTCTTTT
CTTCAATAGG	TATTTGGAAT	AATATAAATT	TTAAAAAGGA			
TATGGAGACA	AAAAATGAAT	GATTTAATTT	CAGTTATTGT	ACCAATTTAT	AATGTCCAAG	ATTATCTTGA
TAAATGTATT	AACAGTATTA	TTAACCAAAC	ATATACTAAT			
TTAGAGGTTA	TTCTCGTAAA	TGATGGAAGT	ACTGATGATT	CTGAGAAAAAT	TTGCTTAAAC	TATATGAAGA
ACGATGGAAG	AATTAATAT	TACAAGAAAA	TTAATGGCGG			
TCTAGCAGAT	GCTCGAAATT	TCGGACTAGA	ACATGCAACA	GGTAAATATA	TTGCTTTTGT	CGATTCTGAT
GACTATATAG	AAGTTGCAAT	GTTCGAGAGA	ATGCATGATA			
ATATAACTGA	GTATAATGCC	GATATAGCAG	AGATAGATTT	TTGTTTAGTA	GACGAAAACG	GGTATACAAA
GAAAAAAGA	AATAGTAATT	TTCATGTCTT	AACGAGAGAA			
GAGACTGTAA	AAGAATTTTT	GTCAGGATCT	AATATAGAAA	ATAATGTTTG	GTGCAAGCTT	TATTCACGAG
ATATTATAAA	AGATATAAAA	TTCCAAATTA	ATAATAGAAG			
TATTGGTGAG	GATTTGCTTT	TTAATTTGGA	GGTCTTGAAC	AATGTAACAC	GTGTAGTAGT	TGATACTAGA
GAATATTATT	ATAATTATGT	CATTCGTAAC	AGTTCGCTTA			
TTAATCAGAA	ATTCTCTATA	AATAATATTG	ATTTAGTCAC	AAGATTGGAG	AATTACCCCT	TTAAGTTAAA
AAGAGAGTTT	AGTCATTATT	TTGATGCAAA	AGTTATTAAA			
GAGAAGGTTA	AATGTTTTAAA	CAAAATGTAT	TCAACAGATT	GTTTGGATAA	TGAGTTCCTG	CCAATATTAG
AGTCTTATCG	AAAAGAAATA	CGTAGATATC	CATTTATTAA			
AGCGAAAAGA	TATTTATCAA	GAAAGCATT	AGTTACGTTG	TATTTGATGA	AATTTTCGCC	TAAACTATAT
GTAATGTTAT	ATAAGAAATT	TCAAAAGCAG	TAGAGGTTAA			
AATGGATAAA	ATTAGTGTTA	TTGTTCCAGT	TTATAATGTA	GATAAATATT	TAAGTAGTTG	TATAGAAAGC
ATTATTAATC	AAAATTATAA	AAATATAGAA	ATATTATTGA			
TAGATGATGG	CTCTGTAGAT	GATTCTGCTA	AAATATGCAA	GGAATATGCA	GAAAAAGATA	AAAGAGTAAA
AATTTTTTTC	ACTAATCATA	GTGGAGTATC	AAATGCTAGA			
AATCATGGAA	TAAAGCGGAG	TACAGCTGAA	TATATTATGT	TTGTTGACTC	TGATGATGTT	GTTGATAGTA
GATTAGTAGA	AAAATTATAT	TTTAATATTA	TAAAAAGTAG			
AAGTGATTTA	TCTGGTTGTT	TGTACGCTAC	TTTTTCAGAA	AATATAAATA	ATTTTGAAGT	GAATAATCCA
AATATTGATT	TTGAAGCAAT	TAATACCGTG	CAGGACATGG			
GAGAAAAAAA	TTTTATGAAT	TTGTATATAA	ATAATATTTT	TTCTACTCCT	GTTTGTAAAC	TATATAAGAA
AAGATACATA	ACAGATCTTT	TTCAAGAGAA	TCAATGGTTA			
GGAGAAGATT	TACTTTTTTAA	TCTGCATTAT	TTAAGAATA	TAGATAGAGT	TAGTTATTTG	ACTGAACATC
TTTATTTTTA	TAGGAGAGGT	ATACTAAGTA	CAGTAAATTC			
TTTTAAAGAA	GGTGTGTTTT	TGCAATTGGA	AAATTGCAA	AAACAAGTGA	TAGTATTGTT	TAAGCAAATA
TATGGTGAGG	ATTTTGACGT	ATCAATTGTT	AAAGATACTA			
TACGTTGGCA	AGTATTTTAT	TATAGCTTAC	TAATGTTTTAA	ATACGGAAAA	CAGTCTATTT	TTGACAAATT
TTTAATTTTT	AGAAATCTTT	ATAAAAAATA	TTATTTTAAAC			
TTGTTAAAAAG	TATCTAACAA	AAATTCTTTG	TCTAAAAATT	TTTGTATAAG	AATTGTTTCG	AACAAAGTTT
TTAAAAAAT	ATTATGGTTA	TAATAGGAAG	ATATCATGGA			
TACTATTAGT	AAAATTTCTA	TAATTGTACC	TATATATAAT	GTAGAAAAAT	ATTTATCTAA	ATGTATAGAT
AGCATTGTAA	ATCAGACCTA	CAAACATATA	GAGATTCTTC			
TGGTGAATGA	CGGTAGTACG	GATAATTCGG	AAGAAATTTG	TTTAGCATAT	GCGAAGAAAG	ATAGTCGCAT
TCGTTATTTT	AAAAAAGAGA	ACGGCGGGCT	ATCAGATGCC			
CGTAATTATG	GCATAAGTCG	CGCCAAGGGT	GACTACTTAG	CTTTTATAGA	CTCAGATGAT	TTTATTCATT
CGGAGTTTCAT	CCAACGTTTA	CACGAAGCAA	TTGAGAGAGA			
GAATGCCCTT	GTGGCAGTTG	CTGGTTATGA	TAGGGTAGAT	GCTTCGGGGC	ATTTCTTAAC	AGCAGAGCCG
CTTCCTACAA	ATCAGGCTGT	TCTGAGCGGC	AGGAATGTTT			
GTAAAAAGCT	GCTAGAGGCG	GATGGTCATC	GCTTTGTGGT	GGCCTGTAAT	AAACTCTATA	AAAAAGAACT
ATTTGAAGAT	TTTCGATTTG	AAAAGGGTAA	GATTCATGAA			
GATGAATACT	TCACTTATCG	CTTGCTCTAT	GAGTTAGAAA	AAGTTGCAAT	AGTTAAGGAG	TGCTTGTAAT
ATTATGTTGA	CCGAGAAAAAT	AGTATCACAA	CTTCTAGCAT			
GACTGACCAT	CGCTTCCATT	GCCTACTGGA	ATTTCAAAAT	GAACGAATGG	ACTTCTATGA	AAGTAGAGGA
GATAAAGAGC	TCTTACTAGA	GTGTTATCGT	TCATTTTTAG			
CCTTTGCTGT	TTTGTTTTTA	GGCAAATATA	ATCATTGGTT	GAGCAAACAG	CAAAAGAAGC	TT

RQTKLALFDM	IAVAISAILT	SHIPNADLNR	SGIFIIMMVH	YFAFFISRMP	VEFEYRGNLI
EFEKTFNYSI	IFAIFLTAVS	FLENNFALS	RRGAVYFTLI	NFVLVYLFNV	
IIKQFKDSFL	FSTIYQKKT	LITTAERWEN	MQVLFESHKQ	IQKNLVALVV	LGTEIDKINL
SLPLYYSVEE	AIEFSTREVV	DHVFINLPSE	FLDVKQFVSD	FELLGIDVSV	
DINSFGFTAL	KNKKIQLLGD	HSIVTFSTNF	YKPSHIMMKR	LLDILGAVVG	LIICGIVSIL
LVPIIRRDGG	PAIFAQKRVG	QNGRIFTFYK	FRSMYVDAEE	RKKDLLSQNQ	
MOGWVCFKMG	KTILELLQLD	ISYAKTSLDE	LPQFYNVLIG	DMSLVGTRPP	TVDEFEKYTP
GQKRRLSFKP	GITGLWQVSG	RSNITDFDDV	VRLDLAYIDN	WTIWSDIKIL	
LKTVKVVLLR	EGSK				

CPS1E

DNA Serotype 1

SEQ ID NO:30

FIG. 4C

MKVCLVGSSG GHLTHLYLLK PFWKEEERFW VTFDKEDARS LLKNEKMYPY YFPTNRNLIN
LVKNTFLAFK ILRDEKPDVI ISSGAAVAVP FFYIGKLFGA KTIYIEVFDR
VNKSTLTGKL VYPVTDIFIV QWEEMKKVYP KSINLGSIF

CPS1F

DNA Serotype 1

SEQ ID NO:31

FIG. 4D

MIFVTVGTHE QQFNRLIKEI DLLKKNGSIT DEIFIQTGYS DYIPEYCKYK KFLSYKEMEQ
YINKSEVVIC HGGPATFMNS LSKGKKQLLF PRQKKYGEHV NDHQVEFVRR
ILQDNNILFI ENIDDLFEKI IEVSKQTNFT SNNNFFCERL KQIVEKFNED QENE

CPSIG

DNA Serotype 1

SEQ ID NO:32

FIG. 4E

MFKLFKYDPE YFIFKYFWLI IFIPEQKYVF LLIFMNLILF HIKFLKTKLI LKNEILLFLL
WSILCFVSVV TSMFVEINFE RLFADFTAPI IWIIAIMYYN LYSFINIDYK
KLKNSIFFSF LVLLGISALY IIQNGKDIVF LDRHLIGLDY LITGVKTRLV GFMNYPTLNT
TTIIVSIPLI FALIKNKMQQ FFFLCCLAFIP IYLSGSRIGS LSPLAILIIC
LLWRYIGGKF AWIKKLIVIF VILLIILNTE LLYHEILAVY NSRESSNEAR FIIYQGSIDK
VLENNILFGY GISEYSVTGT WLGSHSGYIS FFYKSGIVGL ILLMFSFFYV
IKKSYGVNGE TALFYFTSLA IFFIYETIDP IIIILVLFFS SIGIWNNINF KKDMETKNE

CPS1H

DNA Serotype 1

SEQ ID NO:33

FIG. 4F

MNDLISVIVP IYNVQDYLDK CINSIINQTY TNLEVILVND GSTDDSEKIC LNYMKNDGRI
KYYKKINGGL ADARNEGLEH ATGKYIAFVD SDDYIEVAMF ERMHDNITEY
NADIAEIDFC LVDENGYTKK KRNSNEHVL T REETVKEFLS GSNIENNVWC KLYSRDIKD
IKFQINNRSI GEDLLFNLEV LNNVTRVVVD TREYYNYVI RNSSLINQKF
SINNIDLVTR LENYPFKLKR EFSHYFDAKV IKEKVKCLNK MYSTDCLDNE FLPILESYRK
EIRRYPFIKA KRYLSRKHLV TLYLMKFSPK LYVMLYKKFQ KQ

CPS1I

DNA Serotype 1

SEQ ID NO:34

FIG. 4G

MDKISVIVPV	YNVDKYLSSC	IESIINQNYK	NIEILLIDDG	SVDDSAKICK	EYEKDKRVKI
FFTNHSGVSN	ARNHGIKRST	AEYIMFVDS	DVVD SRLVEK	LYFNIIKSRS	
DLSGCLYATF	SENINNFEVN	NPNI DFEAIN	TVQDMGEKNF	MNLXXNNIFS	TPVCXLYQKR
YITDLFQENQ	WLGEDLLFNL	HYLKNIDRVS	YLTEHLYFYR	RGILSTVNSF	
KEGVFLQLEN	LQKQVIVLFK	QIYGEDFDVS	IVKDTIRWQV	FYYSLLMFKY	GKQSIFDKFL
IFRNLYKKYY	FNLLKVSNN	SLSKNFCIRI	VSNKVFKKIL	WL	

CPS1J

DNA Serotype 1

SEQ ID NO:35

FIG. 4H

MDTISKISII VPIYNVEKYL SKCIDSIVNQ TYKHIEILLV NDGSTDNSEE ICLAYAKKDS
RIRYFKKENG GLSDARNYGI SRAKGDYLAF IDSDDFIHSE FIQRLHEAIE
RENALVAVAG YDRVDASGHF LTAEPLPTNQ AVLSGRNVCK KLEADGHRF VVACNKLYKK
ELFEDFRFEK GKIHEDEYFT YRLLYELEKV AIVKECLYYY VDRENSITTS
SMTDHRFHCL LEFQNERMDF YESRGDKELL LECYRSFLAF AVLFLGKYNH WLSKQQKK

CPS1K

DNA Serotype 1

SEQ ID NO:36

FIG. 4I

AAGCTTATCG	TCAAGGTGTT	CGCTATATCG	TGGCGACATC	TCATAGACGA	AAAGGGATGT
TTGAAACACC	AGAAAAAGTT	ATCATGACTA	ACTTTCTTCA	ATTTAAAGAC	
GCAGTAGCAG	AAGTTTATCC	TGAAATACGA	TTGTGCTATG	GTGCTGAATT	GTATTATAGT
AAAGATATAT	TAAGCAAAC	TGAAAAAAG	AAAGTACCCA	CACTTAATGG	
CTCGCGCTAT	ATTCTTTTGG	AGTTCAGTAG	TGATACTCCT	TGGAAAGAGA	TTCAAGAAGC
AGTGAACGAA	GTGACGCTAC	TTGGGCTAAC	TCCCGTACTT	GCCCATATAG	
AACGATATGA	CGCCCTAGCG	TTTCATGCAG	AGAGAGTAGA	AGAGTTAATT	GACAAGGGAT
GCTATACTCA	GGTAAATAGT	AATCATGTGC	TGAAGCCAC	TTTAATTGGT	
GATCGAGCAA	AAGAATTTAA	AAAACGTACT	CGGTATTTTT	TAGAGCAGGA	TTTAGTACAT
TGTGTTGCTA	GCGATATGCA	TAATTTATCT	AGTAGACCTC	CGTTTATGAG	
GGAGGCTTAT	AAGTTGCTAA	CAGAGGAATT	TGGCAAAGAT	AAAGCGAAAG	CGTTGCTAAA
AAAGAATCCT	CTTATGCTAT	TAAAAACCA	GGCGATTTAA	ACTGGTTACT	
CTAGATTGTG	GAGAGAAAAA	TGGATTTAGG	AACTGTTACT	GATAAACTGT	TAGAACGCAA
CAGTAAACGA	TTGATACTCG	TGTGCATGGA	TACGTGTCTT	CTTATAGTTT	
CCATGATTTT	GAGCAGACTG	TTTTTGGATG	TTATTATTGA	CATACCAGAT	GAACGCTTCA
TTCTTGCAGT	TTTATTCGTA	TCAATTTTAT	ATTTGATTCT	ATCGTTTAGA	
TTAAAAGTCT	TTTCATTAAT	TACGCGTTAC	ACAGGGTATC	AGAGTTATGT	AAAAATAGGA
CTTAGTTTAA	TATCTGCGCA	TTTATTGTTT	TTAATTATCT	CAATGGTGT	
GTGGCAGGCT	TTTAGTTATC	GTTTCATCTT	AGTATCCCTA	TTTTTGTCTG	ATGTAATGCT
CATTACTCCG	AGGATTGTTT	GGAAAGTCTT	ACATGAGACG	AGAAAAAATG	
CTATCCGTAA	GAAAGTAGC	CCACTAAGAA	TCTTAGTAGT	AGGTGCTGGA	GATGGTGGA
ATATTTTTAT	CAATACTGTC	AAAGATCGAA	AATTGAATTT	TGAAATTGTC	
GGTATCGTTG	ATCGTGATCC	AAATAAACTT	GGAACATTTA	TCCGTACGGC	TAAAGTTTTA
GGAAACCGTA	ATGATATTCC	ACGACTGGTA	GAGGAATTAG	CTGTTGACCA	
AGTGACGATT	GCCATCCCTT	CTTTAAATGG	TAAGGAGCGA	GAGAAGATTG	TTGAAATCTG
TAACACTACA	GGAGTGACCG	TCAATAATAT	CCCGAGTATT	GAAGACATTA	
TGGCGGGGAA	CATGCTGTGC	AGTGCCTTTC	AGGAAATTGA	CGTAGCAGAC	CTTCTTGGTC
GACCAGAGGT	TGTTTTGGAT	CAGGATGAAT	TGAATCAGTT	TTTCCAAGGG	
AAAACAATCC	TTGTCACAGG	AGCAGGTGGC	TCTATCGGTT	CAGAGCTATG	TCGTCAAATT
GCTAAGTTTA	CGCCTAAACG	CTTGTTGTTG	CTTGACATG	GAGAAAATTC	
AATCTATCTC	ATTTCATCGAG	AGTTACTGGA	AAAGTACCAA	GGTAAGATTG	AGTTGGTCCC
TCTCATTGCA	GATATTCAAG	ATAGAGAATT	GATTTTATAG	ATAATGGCTG	
AATATCAACC	CGATGTTGTT	TATCATGCTG	CAGCACATAA	GCATGTTTCT	TTGATGGAAT
ATAATCCACA	TGAAGCAGTG	AAGAATAATA	TTTTTGGAAC	GAAGAATGTG	
GCTGAGGCGG	CTAAAACTGC	AAAGGTTGCC	AAATTTGTTA	TGGTTTCAAC	AGATAAAGCT
GTTAATCCAC	CAAATGTCAT	GGGAGCGACT	AAACGTGTTG	CAGAAATGAT	
TGTTACAGGT	TTAAACGAGC	CAGGTCAGAC	TCAATTTGCG	GCAGTCCGGT	TTGGGAATGT
TCTAGGTAGT	CGTGGAAGTG	TTGTTCCGCT	ATTCAAAGAG	CAAATTAGAA	
AAGTGAGACC	TGTTACGGTT	ACCGACTTTA	GGATGACTCG	TTATTTTCATG	ACGATTCCCTG
AGGCAAGTCG	TTTGGTTATC	CAAGCTGGAC	ATTTGGCAAA	AGGTGGAGAA	
ATATTTGTCT	TGGATATGGG	CGAGCCAGTA	CAAATCCTGG	AATTGGCAAG	AAAAGTTATC
TTGTTAAGTG	GACACACAGA	GGAAGAAATC	GGGATTGTAG	AATCTGGAAT	
CAGACCAGGC	GAGAAACTCT	ACGAGGAATT	ATTATCAACA	GAAGAACGTG	TCAGCGAACA
GATTCATGAA	AAAATATTTG	TGGGTCGCGT	TACAAATAAG	CAGTCGGACA	
TTGTCAATTC	ATTTATCAAT	GGATTACTCC	AAAAAGATAG	AAATGAATTA	AAAAATATGT
TGATTGAATT	TGCAAAACAA	GAATAAGAAA	GTAAGAAATA	TTTTTACTTT	
CCTAGAGTTT	AAACGATGTT	TAAGTTCTAG	GAAGGTTAGA	ATACCTAATT	AACAACAATA
TTACTATTTA	TTAAGAGTCA	GATAATAGCA	ACTAAGTGCT	ACAACTATC	
TTTATAATAA	GTATATTTTG	TCAAAAGGGA	GATGTGAAAT	GTATCCAATT	TGTAAACGTA
TTTTAGCAAT	TATTATCTCA	GGGATTGCTA	TTGTTGTCT	GAGTCCAATT	
TTATTATTTA	TTGCATTGGC	AATTAAATTA	GATTCTAAAG	GTCCGGTATT	ATTTAAACAA
AAGCGGGTTG	GTAAAAACAA	GTCATACTTT	ATGATTTATA	AATTCCGTTT	
TATGTACGTT	GACGCACCAA	GTGATATGCC	GACTCATCTA	TTAAAGGATC	CTAAGGCGAT
GATTACCAAG	GTGGGCGCGT	TTCTCAGAAA	AACAAGTTTA	GATGAACCTG	
CACAGCTTTT	TAATATTTTT	AAAGGTGAAA	TGGCGATTGT	TGGTCCACGC	CCAGCCTTAT
GGAATCAATA	TGACTTAATT	GAAGAGCGAG	ATAAATATGG	TGCAAATGAT	
ATTGCTCCTG	GACTAACCAG	TTGGGCTCAA	ATTAATGCTC	GTGATGAATT	GGAAATTGAT
GAAAAGTCAA	AATTAGATGG	ATATTATGTT	CAAAATATGA	GTCTAGGTTT	
GGATATTAAA	TGTTTCTTAG	GTACATTCCT	CAGTGTAGCC	AGAAGCGAAG	GTGTTGTTGA
AGGTGGAACA	GGGCAGAAAG	GAAAAGGATG	AAATTTTCAG	TATTAATGTC	
GGTCTATGAG	AAAGAAAAAC	CAGAGTTTCT	TAGGGAATCT	TTGGAAAGCA	TCCTTGTCAA
TCAAACAATG	ATTCCAACGG	AGGTTGTCTT	GGTAGAGGAT	GGGCCACTCA	
ATCAGAGCTT	ATATAGTATT	TTAGAAGAAT	TTAAAAGTCG	ATTTTCATTT	TTTAAAACGA
TAGCCTTGGA	AAAGAATTTC	GGTTTAGGAA	TTGCACTGAA	TGAAGGTTTG	
AAACATTGTA	ATTATGAGTG	GGTTTGACAG	AAATGGATTG	TGATGATGTT	GCATATACAT
ACACGTTTTG	AAAAGCAAGT	TAACTTTATA	AAACAAAACC	CGACTATAGA	

TATTGAGATA	GATGAGTTCT	TAAATTCTAC	TAGTGAAATA	GTTTCTCATA	AAAATGTTCC
AACCCAGCAC	GATGAAATAT	TAAAGATGGC	AAGGCGGGAG	AAATCCATGT	
GCCACATGAC	TGTAATGTTT	AAAAAGAAAA	GTGTCGAGAG	AGCAGGGGGG	TATCAAACAC
TTCCGTACGT	AGAAGATTAT	TTCCTTTGGG	TGCGCATGAT	TGCTTCAGGA	
TCGAAATTTG	CAAACATTGA	TGAAACACTA	GTTCTTGCAC	GTGTTGGAAA	TGGGATGTTC
AATAGGAGGG	GGAACAGAGA	ACAAATTAAC	AGTTGGACAT	TACTAATTGA	
ATTTATGTTA	GCTCAAGGAA	TTGTTACACC	ACTAGATGTA	TTTATTAATC	AAATTTACAT
TAGGGTCTTT	GTTTATATGC	CAACTTGGAT	AAAGAAACTC	ATTTATGGAA	
AAATCTTAAG	GAAATAGTAT	GATTACAGTA	TTGATGGCTA	CATATAATGG	AAGCCCATTT
ATAATAAAAC	AGTTAGATTG	AATTCGAAAT	CAAAGTGTAT	CAGCAGACAA	
AGTTATTATT	TGGGATGATT	GCTCGACAGA	TGATACAATA	AAAATAATAA	AAGATTATAT
AAAAAAATAT	TCTTTGGATT	CATGGGTTGT	CTCTCAAAAT	AAATCTAATC	
AGGGGCATTA	TCAAACATTT	ATAAATTTGA	CAAAGTTAGT	TCAGGAAGGA	ATAGTCTTTT
TTTCAGATCA	AGATGATATT	TGGGACTGTC	ATAAAATTGA	GACAATGCTT	
CCAATCTTTG	ACAGAGAAAA	TGTATCAATG	GTGTTTTGCA	AATCCAGATT	GATTGATGAA
AACGGAAATA	TTATCAGTAG	CCCAGATACT	TCGGATAGAA	TCAATACGTA	
CTCTCTAGA					

DNA Serotype 9

SEQ ID NO:37

FIG. 5B

AYRQGVRYIV ATSHRRKGMF ETPEKVIMTN FLQFKDAVAE VYPEIRLCYG AELYYSKDIL
SKLEKKKVPT LNGSRYILLE FSSDTPWKEI QEAVNEVTLL GLTPVLAHIE
RYDALAFHAE RVEELIDKGC YTQVNSNHVL KPTLIGDRAK EFKKRTRYFL EQDLVHCVAS
DMHNLSSRPP FMREAYKLLT EEFGKDKAKA LLKKNPLMLL KNQAI

CPS9D

DNA Serotype 9

SEQ ID NO:38

FIG. 5C

MDLGTVTDKL	LERN SKRLIL	VCMDTCLLIV	SMILSRFLD	VIIDIPDERF	ILAVLEVSIL
YLILSFRLKV	FSLITRYTGY	QSYVKIGLSL	ISAHSLFLII	SMVLWQAFSY	
RFILVSLFLS	YVMLITPRIV	WKVLHETRKN	AIRKKDSPLR	ILVVGAGDGG	NIFINTVKDR
KLNFEIVGIV	DRDPNKLGT	IRTAKVLGNR	NDIPRLVEEL	AVDQVTIAIP	
SLNGKEREKI	VEICNTTGVT	VNNMPSIEDI	MAGNMSVSAF	QEIDVADLLG	RPEVVLDQDE
LNQFFQGKTI	LVTGAGGSIG	SELCRQIAKF	TPKRLLLLGH	GENSIYLIHR	
ELLEKYQGKI	ELVPLIADIQ	DRELIFSIMA	EYQPDVYHA	AAHKHVPLME	YNPHEAVKNN
IFGTKNVAEA	AKTAKVAKFV	MVSTDKAVNP	PNVMGATKRV	AEMIVTGLNE	
PGQTQFAAVR	FGNVLGSRGS	VVPLFKEQIR	KGGPVTVTDF	RMTRYFMTIP	EASRLVIQAG
HLAKGGEIFV	LDMGEPVQIL	ELARKVILLS	GHTEEEIGIV	ESGIRPGEKL	
YEELLSTEER	VSEQIHEKIF	VGRVTNKQSD	IVNSFINGLL	QKDRNELKNM	LIEFAKQE

CPS9E

DNA Serotype 9

SEQ ID NO:39

FIG. 5D

MYPICKRILA IIISGIAIVV LSPILLLIAL AIKLDKGPV LFKQKRVGKN KSYFMIYKFR
SMYVDAPSDM PTHLLKDPKA MITKVGAFRL KTSLELPLQL FNIFKGEMAI
VGPRPALWNQ YDLIEERDKY GANDIRPGLT GWAQINGRDE LEIDEKSKLD GYYVQNMSLG
LDIKCFLGTF LSVARSEGVV EGGTGQKKG

CPS9F

DNA Serotype 9

SEQ ID NO:40

FIG. 5E

MKFSVLMSVY EKEKPEFLRE SLESILVNQT MIPTEVVLVE DGPLNQSLYS ILEEFKSRFS
FFKTIALEKN SGLGIALNEG LKHCNYEWVC TKWILMMLHI HTRFEKQVNF
IKQNPTIDIE IDEFLNSTSE IVSHKNVPTQ HDEILKMARR EKSMCHMTVM FKKKSVERAG
GYQTLPYVED YFLWVRMIAS GSKEANIDET LVLARVGNGM FNRRGNREQI
NSWTLLIEFM LAQGIVTPLD VFINQIYIRV FVYMPTWIKK LIYGKILRK

CPS9G

DNA Serotype 9

SEQ ID NO:41

FIG. 5F

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MITVLMATYN GSPFIKQLD SIRNQSVSAD KVIIWDDCST DDTIKIHKDY IKKYSLDSWV
VSQNKSNQGH YQTFINLTKL VQEGIVFFSD QDDIWDCHKI ETMLPIFDRE
NVSMVFCKSR LIDENGNIIS SPDTSDRINT YSL

CPS9H

DNA Serotype 9

SEQ ID NO:42

FIG. 5G

CTGCAGCACA	TAAGCATGTT	CCATTGATGG	AATATAATCC	ACATGAAGCA	GTGAAGAATA
ATATTTTTGG	AACGAAGAAT	GTGGCTGAGG	CGGCTAAAAC	TGCAAAGGTT	
GCCAAATTTG	TTATGGTTTC	AACAGATAAA	GCTGTTAATC	CGCCAAATGT	CATGGGAGCG
ACTAAACGTG	TTGCAGAAAT	GATTGTAACA	GGTTTAAACG	AGCCAGGTCA	
GACTCAATTT	GCGGCAGTCC	GTTTTGGGAA	TGTTCTAGGT	AGTCGTGGAA	GTGTTGTTCC
GCTATTCAAA	GAGCAAATTA	GAAAAGGTGG	ACCTGTTACG	GTTACCGACT	
TTAGGATGAC	TCGTTATTTC	ATGACGATTC	CTGAGGCAAG	TCGTTTGGTT	ATCCAAGCTG
GACATTTGGC	AAAAGGTGGA	GAAATCTTTG	TCTTGGATAT	GGGTGAGCCA	
GTACAAATCC	TGGAATTGGC	AAGAAAAGTT	ATCTTGTTAA	GCGGACATAC	AGAGGAAGAA
ATCGGGATTG	TAGAATCTGG	AATCAGACCA	GGCGAGAAAC	TCTACGAGGA	
ATTGTTATCA	ACAGAAGAAC	GTGTCAGCGA	ACAGATTCAT	GAAAAAATAT	TTGTGGGTCG
CGTTACAAAT	AAGCAGTCGG	ACATTGTCAA	TTCATTTATC	AATGGATTAC	
TCCAAAAAGA	TAGAAATGAA	TTAAAAGATA	TGTTGATTGA	ATTTGCAAAA	CAAGAATAAG
AAAGTAAAAA	ATATTTTTTAC	TTTCCTAGAG	TTTAAACGAT	GTTTAAAGTTC	
TAGGAAGGTT	GGAATTGCTT	TCGTGGAGGT	GATAGATAGA	AACCTATATA	TTGTAGAGAAG
AAAGGATATT	AAACTAAAGG	TGAATCGGAA	CATAAAGTTT	AGATAGAGTT	
GGTATTTAAT	GCCAAACAGG	TGAATGCAAC	CTCTCGCTCG	TTACTAAGCA	GGAGATAGTA
AAGTTGCTTG	AAAGAGAGTT	TGTTAATCAG	TATAAGTAGG	CTAAAGTGAG	
AATATATATC	TATTATTATC	GGTAATGATA	CTATTATTGA	GAATTATTGT	AGTGGGGATA
AAAAATAATTT	TTGGTGATTT	TATCGTCCGA	CTTAAAGGTG	GGTTAAAAAA	
GTACTTATAT	TCTTTTAGAA	TTGATGAAAA	ATATGGGGGA	ATATAATATT	TATAGGAGAT
ACGATGACTA	GAGTAGAGTT	GATTACTAGA	GAATTTTTTA	AGAAGAATGA	
AGCAACCAGT	AAATATTTTC	AGAAGATAGA	ATCAAGAAGA	GGTGAATTAT	TTATTAAATT
CTTTATGGAT	AAGTTACTTG	CGCTTATCCT	ATTATTGCTA	TTATCCCCAG	
TAATCATTAT	ATTAGCTATT	TGGATAAAAT	TAGATAGTAA	GGGGCCCAATT	TTTTATCGCC
AAGAACGTGT	TACGAGATAT	GGTCGAATTT	TTAGAATATT	TAAGTTTAGA	
ACAATGATTT	CTGATGCGGA	TAAAGTCGGA	AGTCTTGTC	CAGTCGGTCA	AGATAATCGT
ATTACGAAAG	TCGGTCACAT	TATCAGAAAA	TATCGGCTGG	ACGAAGTGCC	
CCAACTTTTT	AATGTTTTTAA	TGGGGGATAT	GAGCTTTGTA	GGTGTAAAGAC	CAGAAGTACA
AAAATATGTA	AATCAGTATA	CTGATGAAAT	GTTTGCGACG	TTACTTTTTAC	
CTGCAGGAAT	TACTTCACCA	GCGAGTATTG	CATATAAGGA	TGAAGATATT	GTTTTAGAAAG
AATATTGTTT	TCAAGGCTAT	AGTCCTGATG	AAGCATATGT	TCAAAAAGTA	
TTACCAGAAA	AAATGAAGTA	CAATTTGGAA	TATATCAGAA	ACTTTGGAAT	TATTTCTGAT
TTTAAAGTAA	TGATTGATAC	AGTAATTAA	GTAATAAAAT	AGGAGATTAA	
ATGACAAAA	AGACAAAATA	TTCCATTTTC	ACCACCAGAT	ATTACCCAAG	CTGAAATTGA
TGAAGTTATT	GACACACTAA	AATCTGGTTG	GATTACAACA	GGACCAAAGA	
CAAAAAGAGCT	AGAACGTCGG	CTATCAGTAT	TTACAGGAAC	CAATAAAACT	GTGTGTTTAA
ATTCTGCTAC	TGCAGGATTG	GAAGTAGTCT	TACGAATTCT	TGGTGTTGGA	
CCCGGAGATG	AAGTTATTGT	TCCTGCTATG	ACCTATACTG	CCTCATGTAG	TGTCATTACT
CATGTAGGAG	CAACTCCTGT	GATGGTTGAT	ATTCAAAAAA	ACAGCTTTGA	
GATGGAATAT	GATGCTTTGG	AAAAAGCGAT	TACTCCGAAA	ACAAAAGTTA	TCATTCCCTGT
TGATCTAGCT	GGTATTCCCT	GTGATTATGA	TAAGATTTAT	ACCATCGTAG	
AAAACAAACG	CTCTTTGTAT	GTTGCTTCTG	ATAATAAATG	GCAGAACTT	TTTGGGCGAG
TTATTATCCT	ATCTGATAGT	GCACACTCAC	TAGGTGCTAG	TTATAAGGGA	
AAACCAGCGG	GTTCCCTAGC	AGATTTTACC	TCATTTTCTT	TCCATGCAGT	TAAGAATTTT
ACAACGCTG	AAGGAGGTAG	TGTGACATGG	AGATCACATC	CTGATTTGGA	
TGACGAAGAG	ATGTATAAAG	AGTTTCAGAT	TTACTCTCTT	CATGGTCAGA	CAAAGGATGC
ATTAGCTAAG	ACACAATTAG	GGTCATGGGA	ATATGACATT	GTTATTCCCTG	
GTTACAAGTG	TAATATGACA	GATATTATGG	CAGGTATCGG	TCTTGTCGAA	TTAGAACGTT
ACCCATCTTT	GTTGAATCGT	CGCAGAGAAA	TCATTGAGAA	ATACAATGCT	
GGCTTTGAGG	GGACTTCGAT	TAAGCCGTTG	GTACACCTGA	CGGAAGATAA	ACAATCGTCT
ATGCACTTGT	ATATCACGCA	TCTACAAGGC	TATACTTTAG	AACAACGAAA	
TGAAGTCATT	CAAAAAATGG	CTGAAGCAGG	TATTGCGTGC	AATGTTCACT	ACAAACCATT
ACCTCTTCTC	ACAGCCTACA	AGAATCTTGG	TTTTGAAATG	AAAGATTTTC	
CGAATGCCTA	TCAGTATTTT	GAAAATGAAG	TTACACTGCC	TCTTCATACC	AACTTGAGTG
ATGAAGATGT	GGAGTATGTG	ATAGAAATGT	TTTTAAAAAT	TGTTAGTAGA	
GATTAGTTAT	TTTGGAAGGA	GATATGGTGG	AAAGAGATAT	GGTGGAAGAA	GACACGTTGG
TATCTATAAT	AATGCCCTCG	TGGAATACAG	CTAAGTATAT	ATCTGAATCA	
ATCCAGTCAG	TGTTGGACCA	AACACACCAA	AATTGGGAAC	TTATAATCGT	TGATGATTGT
TCTAATGACG	AAACTGAAAA	AGTTGTTTCG	CATTTCAAAG	ATTCAAGAAT	

AAAGTTTTTT AAAAATTCGA ATAATTTAGG GGCAGCTCTA ACACGAAATA AGGCACTAAG
AAAAGCTAGA GGTAGGTGGA TTGCGTTCTT GGATTCAGAT GATTTATGGC
ACCCGAGTAA GCTAGAAAAA CAGCTTGAAT TTATGAAAAA TAATGGATAT TCATTTACTT
ATCACAATTT TGAAAAGATT GATGAATCTA GTCAGTCTTT ACGTGTCTG
GTGTCAGGAC CAGCAATTGT GACTAGAAAA ATGATGTACA ATTACGGCTA TCCAGGGTGT
TTGACTTTCA TGTATGATGC AGACAAAATG GGTTTAATTC AGATAAAAGA
TATAAAGAAA AATAACGATT ATGCGATATT ACTTCAATTG TGTAAGAAGT ATGACTGTTA
TCTTTTAAAT GAAAGTTTAG CTTCGTATCG AATTAGAAAA AA

DNA Serotype 7

SEQ ID NO:43

FIG. 6B

AAHKHVPLME YNPHEAVKNN IFGTKNVAEA AKTAKVAKFV MVSTDKAVNP PNVMGATKRV
AEMIVTGLNE PGQTQFAAVR FGNVLGSRGS VVPLFKEQIR KGGPVTVTDF
RMTRYFMTIP EASRLVIQAG HLAKGGEIFV LDMGEPVQIL ELARKVILLS GHTEEEIGIV
ESGIRPGEKL YEELLSTEER VSEQIHEKIF VGRVTNKQSD IVNSFINGLL
QKDRNELKDM LIEFAKQE

CPS7E

DNA Serotype 7

SEQ ID NO:44

FIG. 6C

MTRVELITRE FFKKNEATSK YFQKIESRRG ELFIKFFMDK LLALILLLLL SPVIIILAIW
IKLDSKGPIF YRQERVTRYG RIFRIFKFRT MISDADKVGs LVTVGQDNRI
TKVGHIIRKY RLDEVPQLFN VLMGDMSFVG VRPEVQKYVN QYTDEMFA TL LLPAGITSPA
SIAYKDEDIV LEEYCSQGYs PDEAYVQKVL PEKMKYNLEY IRNFGIISDF
KVMIDTVIKV IK

CPS7F

DNA Serotype 7

SEQ ID NO:45

FIG. 6D

MTKRQNIPFS	PPDITQAEID	EVIDTLKSGW	ITTGPKTKEL	ERRLSVFTGT	NKTVCLNSAT
AGLELVLRIL	GVGPGDEVIV	PAMTYTASCS	VITHVGATPV	MVDIQKNSFE	
MEYDALEKAI	TPKTKVIIPV	DLAGIPCDYD	KIYTIVENKR	SLYVASDNKW	QKLFGRVIIL
SDSAHSLGAS	YKGKPAGSLA	DFTSFSEHAV	KNFTTAEGGS	VTWRSHPDLD	
DEEMYKEFQI	YSLHGQTKDA	LAKTQLGSWE	YDIVIPGYKC	NMTDIMAGIG	LVQLERYPSL
LNRRREIEEK	YNAGFEGTSI	KPLVHLTEDK	QSSMHLYITH	LQGYTLEQRN	
EVIQKMAEAG	IACNVHYKPL	PLLTAYKNLG	FEMKDFPNAY	QYFENEVTLP	LHTNLSDEDV
EYVIEMFLKI	VSRD				

CPS7G

DNA Serotype 7

SEQ ID NO:46

FIG. 6E

MVERDMVERD TLVSIIMPSW NTAKYISESI QSVLDQTHQN WELIIVDDCS NDETEKVVSH
FKDSRIKFFK NSNNLGAALT RNKALRKARG RWIAFLDSDD LWHPSKLEKQ
LEFMKNNGYS FTYHNFEEKID ESSQSLRVLV SGPAIVTRKM MYNYGYPGCL TFMYDADKMG
LIQIKDIKKN NDYAILLQLC KKYDCYLLNE SLASYRIRK

CPS7H

DNA Serotype 7

SEQ ID NO:47

FIG. 6F

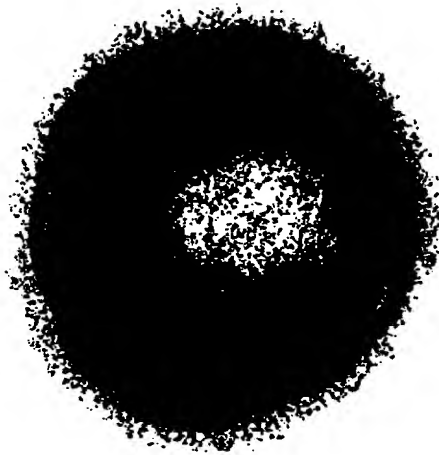
Cps2J	MEKVSIIIVPI FNTKYLREC LDSIISQSYT NLEILLIDDG SSDSSTDICL EYAEQDGRK	60
Cps2K	MINISIIIVPI YNVEQYLSKC INSIVNQTYK HIEILLVNDG STDNSEEICL AYAKKDSRIR	60
	*	
Cps2J	LFRLPNGGVS NARNYGIKNS TANYIMFVDS DDIVDGNIVE SLYTCLKEND SDLSGGLLAT	120
Cps2K	YFKKENGGLS DARNYGISRA KGDYLAFIDS DDFIHSEFIQ RL_HEAIERE NAL__VAVAG	117

Cps2J
(SEQ ID NO:51)

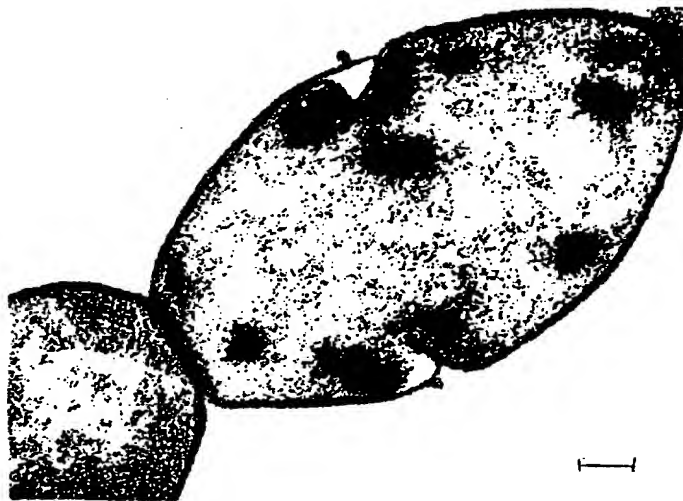
Cps2K
(SEQ ID NO:52)

FIG. 7

A



B



C

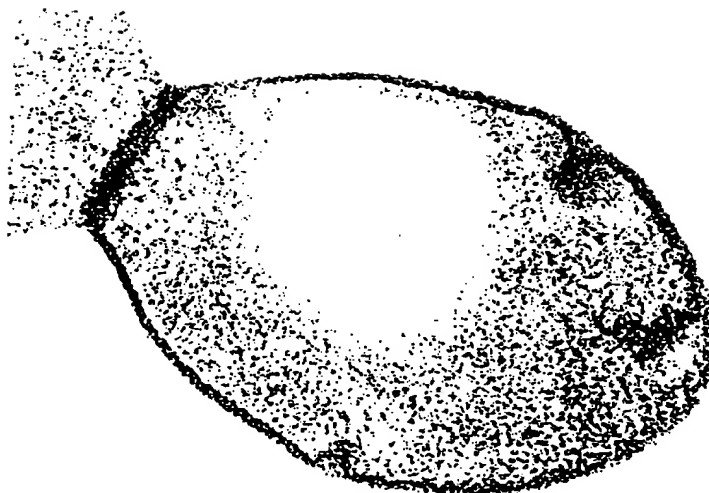


FIG. 8

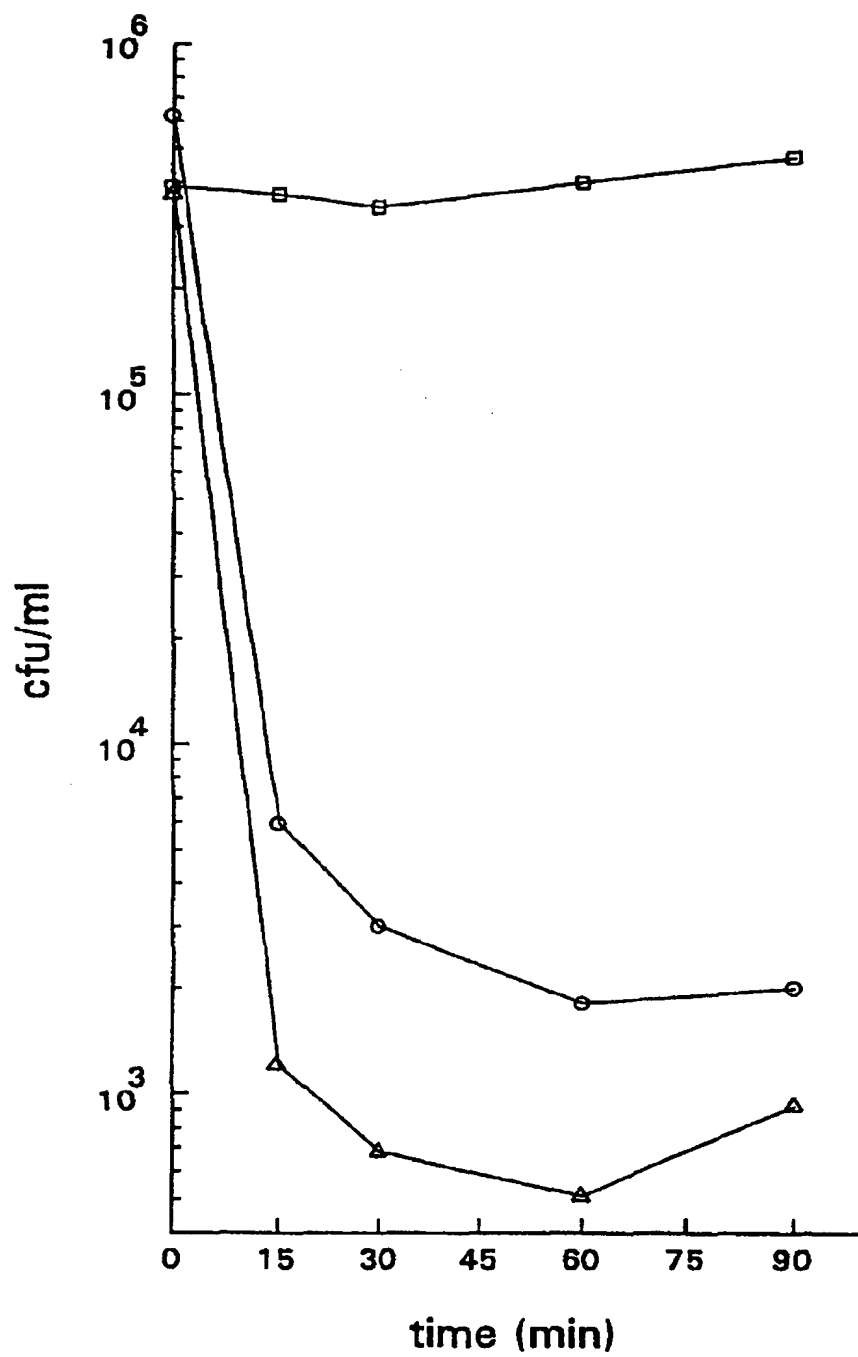


FIG. 9A

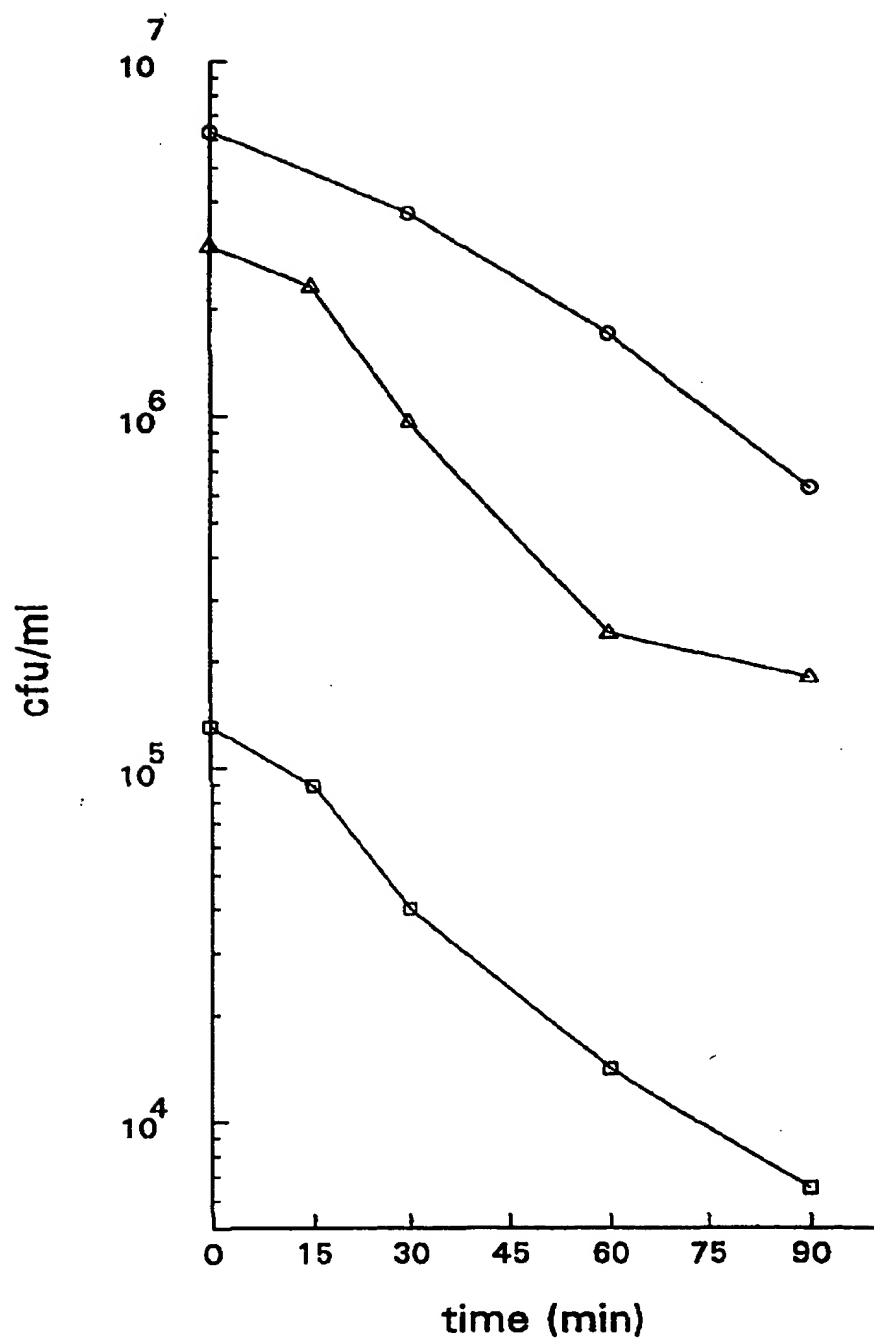


FIG. 9B

```

(1) 10508 AAGGGCACCT CTATAAACTC CCAAATTC GAATTGGAG TTACGAAAGC CTTGTTAAAT --
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
(2) 16985 GGGGGCACCT CTATAAATTC CCAAATTC GAATTGGAG TTACGAAAGC CTTGTTAAAT --
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
(3) 19803 AAGGGCACCT CTATAAACTC CCAAATTC GAATTGGAG TTACGAAAGC CTTGTTAAAT --
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

```

```

(1) CAA-CATTTTA AATTTTAGAA AATTAGTTT TAGAGGTCCTCC 10607 (SEQ ID NO:48)
      ||| ||| ||| ||||| ||||| ||||| ||||| |||||
(2) CAA-CATCTTA AATTTTAGAA AATTAGTTT TAGAGGTCCTCC 17084 (SEQ ID NO:49)
      ||| ||| ||| ||||| ||||| ||||| ||||| |||||
(3) CAAACATTTTA AATTTTAGAA AATTAGTTT TAGAGGTCCTCC 19903 (SEQ ID NO:50)

```

FIG. 10

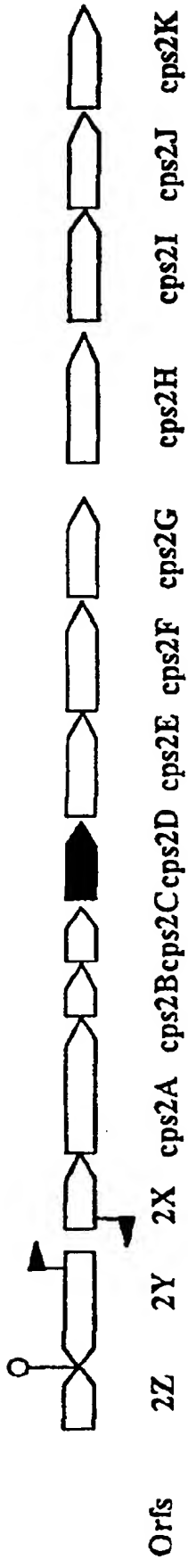


FIG. 11A

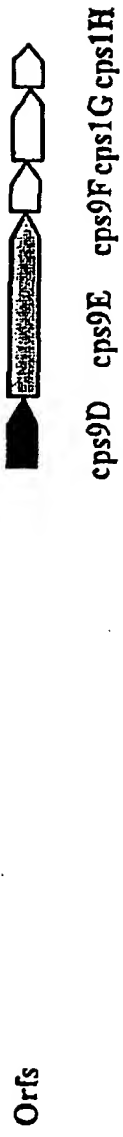
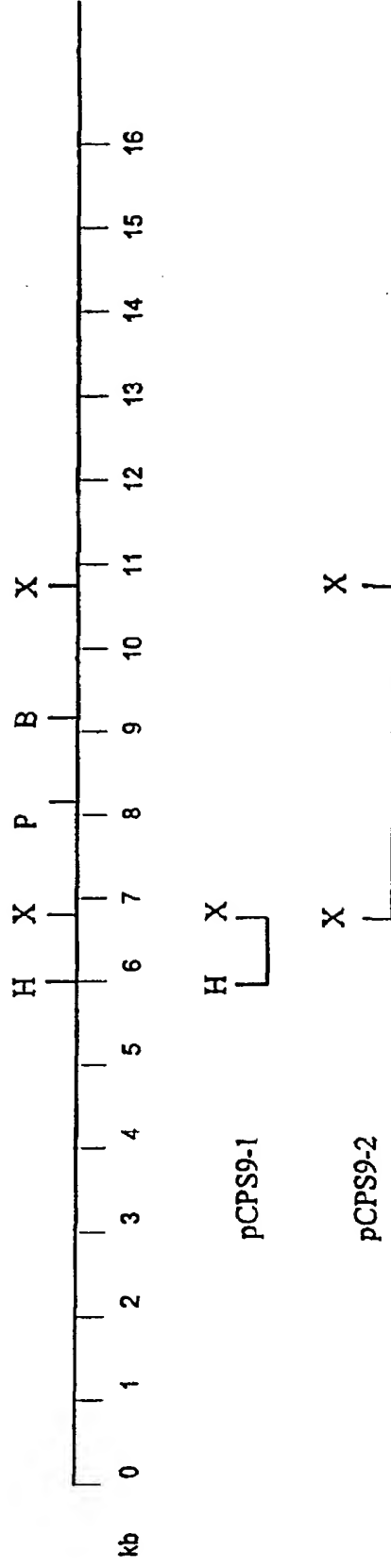


FIG. 11B

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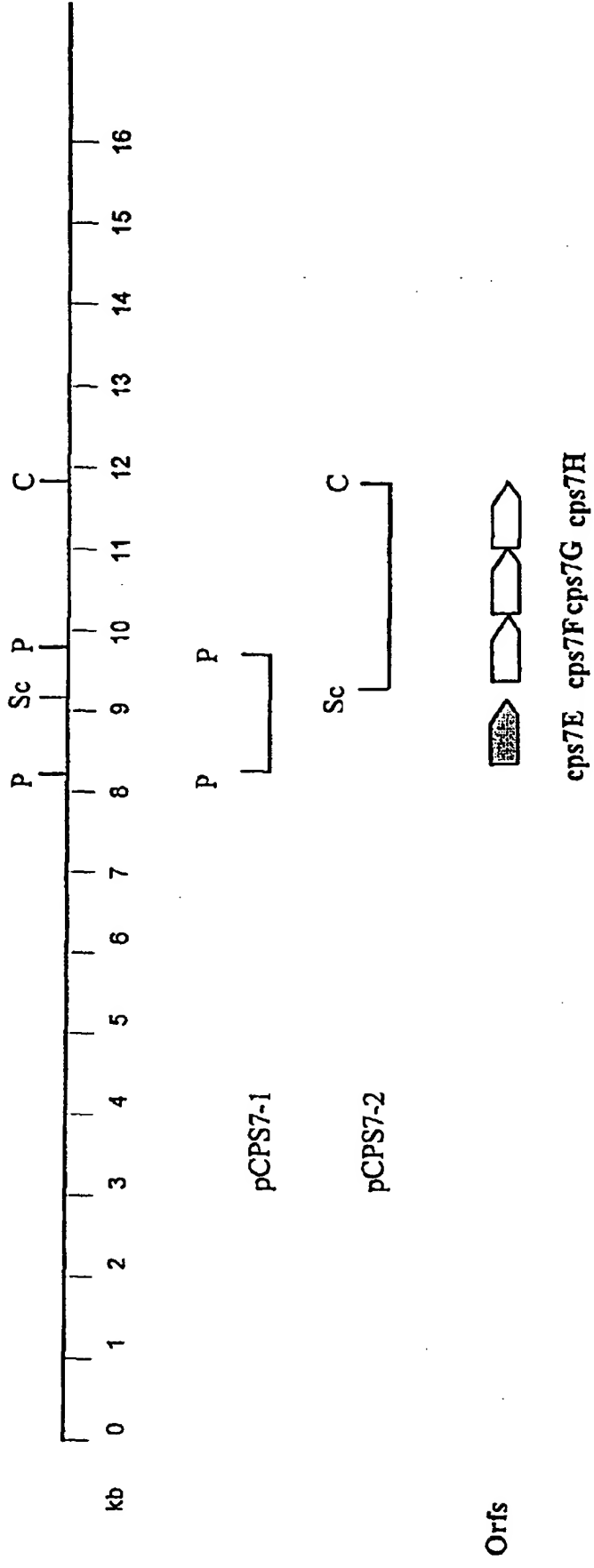


FIG. 11C

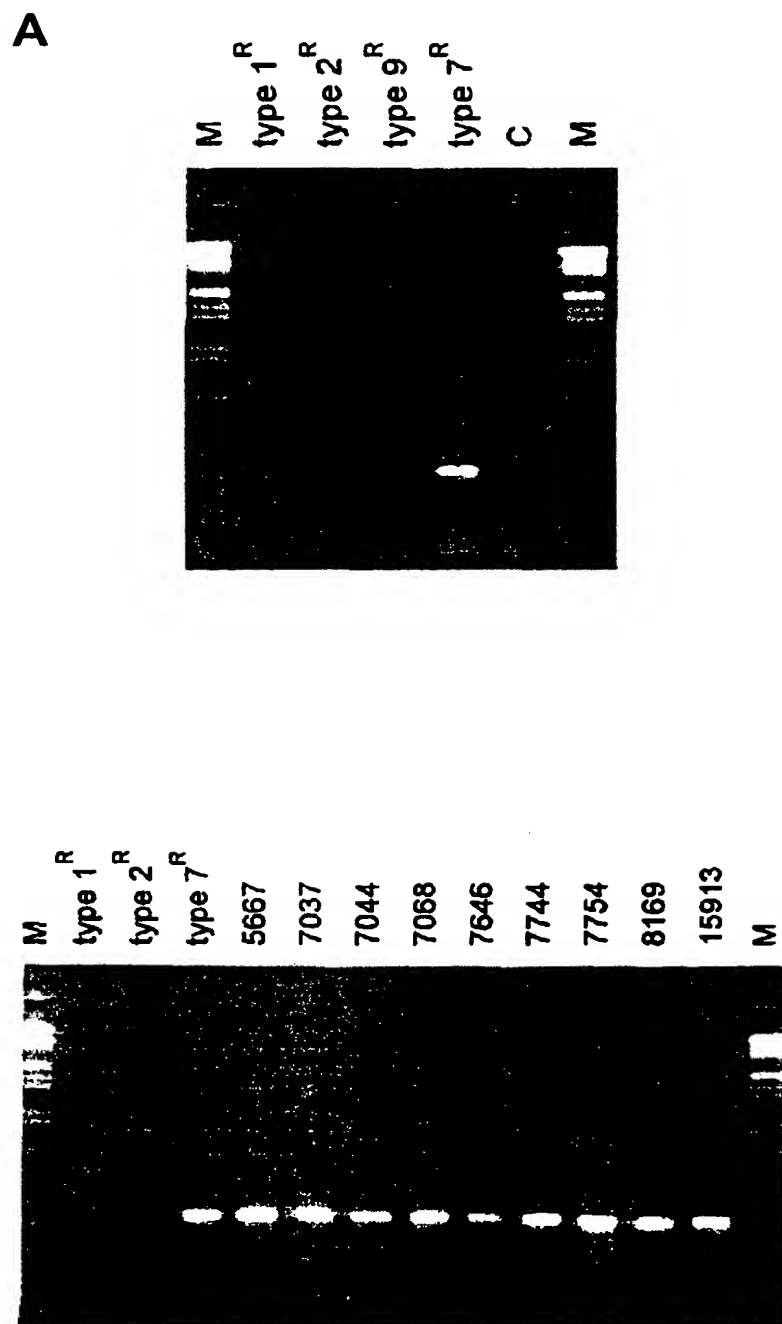


FIG. 12

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